



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/620,533	07/23/2000	YING-QING XU	1018.090US1	5526

23441 7590 03/10/2004

LAW OFFICES OF MICHAEL DRYJA
704 228TH AVENUE NE
PMB 694
SAMMAMISH, WA 98074

EXAMINER

FREJD, RUSSELL WARREN

ART UNIT	PAPER NUMBER
----------	--------------

2128

DATE MAILED: 03/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/620,533

Applicant(s)

XU ET AL.

Examiner

Russell Frejd

Art Unit

2128

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 August 2001.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☒ Claim(s) 13-16 and 30-34 is/are allowed.
6) ☒ Claim(s) 1-7, 12, 17-24 and 29 is/are rejected.
7) ☒ Claim(s) 8-11 and 25-28 is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4, 5 and 6.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Art Unit: 2128

Examination of Application #09/620,533

1. Claims 1-34 of application 09/620,533, filed on 23-July-2000, are presented for examination.

Claim Rejections under 35 U.S.C. § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-7, 12, 17-24 and 29 are rejected under 35 U.S.C. 102(b) as being anticipated by the article authored by Groller et al., hereinafter Groller, entitled "Modeling Textiles as Three Dimensional Textures".

- 3.1 Groller disclosed the invention as claimed, including modeling the 3D-shape of textile materials comprising:

In regard to claims 1, 17 and 18, steps for modeling the physically correct macrostructure of textiles [p. 208, 6th par.](generating a macrostructure of a 3D object), with the textiles consisting of highly repetitive patterns [p. 206, Sec. 2, 4th par.](at least a stitch pattern);

steps for representing the microstructure of knitting yarn [p. 206, Sec. 2, 2nd par.]; and

steps for using a geometric model for representing the microstructure of knitting yarn [pages 206-7, Sec. 2 *The Yarn and Knitwear Model*].

Art Unit: 2128

In regard to claims 2 and 19, Groller discloses modeling knitted fabric made up of two differently colored yarns [p. 212, 2nd par.].

In regard to claims 3, 4 and 21, Groller discloses mapping the 2D planar macrostructure of computational space onto the 2D curved macrostructure (surface) of physical space [p. 208, 5th par.](applying the stitch pattern), and generating more complex textiles by mapping differently colored yarns onto a surface [p. 212, 2nd par.](applying the color pattern).

In regard to claims 5, 6, 7 and 22-24, Groller discloses mapping the planar macrostructure in computational space to the curved macrostructure in physical space [Sec 4, pages 208-11, and Figs. 3, 6 and 7](claim 5), mapping differently colored yarns [p. 212, 2nd par.](applying the color pattern in claim 6), and textile in physical space with a regular arrangement of hexahedral cells [p. 209, 4th par and Fig. 4](the rectangle of claim 7).

In regard to claims 12 and 29, the limitations of these claims were discussed in the rejection of claims 1 and 5, and are therefore considered rejected for the reasons as set forth above.

In regard to claim 20, Groller discloses mapping the 2D planar macrostructure of computational space onto the 2D curved macrostructure (surface) of physical space [p. 208, 5th par.](applying the stitch pattern to a 2D surface).

Allowed Claims

4. Claims 13-16 and 30-34 are deemed by the Examiner to be allowable over the prior art of record at this time.

Art Unit: 2128

Claim Objections

5. The remaining claims 8-11 and 25-28, are objected to for incorporating the rejection of their respective base claims by dependency.

Response Guidelines

6. A shortened statutory period for response to this action is set to expire **3 (three) months and 0 (zero) days** from the date of this letter. Failure to respond within the period for response will cause the application to become abandoned (see MPEP 710.02, 710.02(b)).

7. **Any response to the Examiner in regard to this non-final action should be**

directed to: Russell Frejd, telephone number (703) 305-4839, Monday-Friday from 0630 to 1500 ET, **or** the examiner's supervisor, Kevin Teska, telephone number (703) 305-9704. Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist, telephone number (703) 305-3900.

mailed to: Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to: (703) 872-9306

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

Date: 6-March-2004



**RUSSELL FREJD
PRIMARY EXAMINER**